



WIRELESS CONSULTANTS

Morgan Norville – *Land Use Planner*

Cell phone: (510) 508-9392

Email: [morgan.norville@mmtelecominc.com](mailto:morgan.norville@mmtelecominc.com)

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## GEOGRAPHIC SERVICE AREA

AT&T Wireless has embarked upon a significant initiative to bring 4G wireless coverage to all of its wireless communications facilities across the nation. The attached RF Coverage Maps depict the existing coverage situation around the project site, with maps depicting 1) coverage without the existing facility, 2) coverage with the proposed facility as it fits into the surrounding existing network, and 3) coverage with just the proposed facility. No Height exemption is requested for this site, as the topography and unique location are adequate to provide the needed coverage. These maps display a stark contrast in coverage, since existing conditions lack sufficient AT&T wireless coverage due to the inadequacy of the existing antennas, and with the significant topographical variations in the project area. The Bonsall community is a historically difficult area to cover due to its rolling hills and scarcity of macro wireless sites.

One critical caveat in reviewing the attached coverage plots is that coverage is only one aspect of the project. Carriers have two essential goals in network rollout: coverage and capacity. Coverage maps will only show the quality of signal over a distance. Will a cell phone have reception? How good is the signal? Are dropped calls likely? The answers to these questions are represented in a coverage map. Tantamount to coverage is the other wireless goal: *capacity*. Unless AT&T upgrades the equipment and the nearest cell tower, customers will suffer from slow and frustrating data coverage. Customers are now paying for 4G data coverage on their phones, and cell towers are increasingly “maxed out” with the bombardment of data usage at a given tower. Therefore, you may look at the attached coverage maps and think, “Huh! It’s very green. Why do they need to fuss with this site if there’s already good coverage?” That’s only half of the battle.

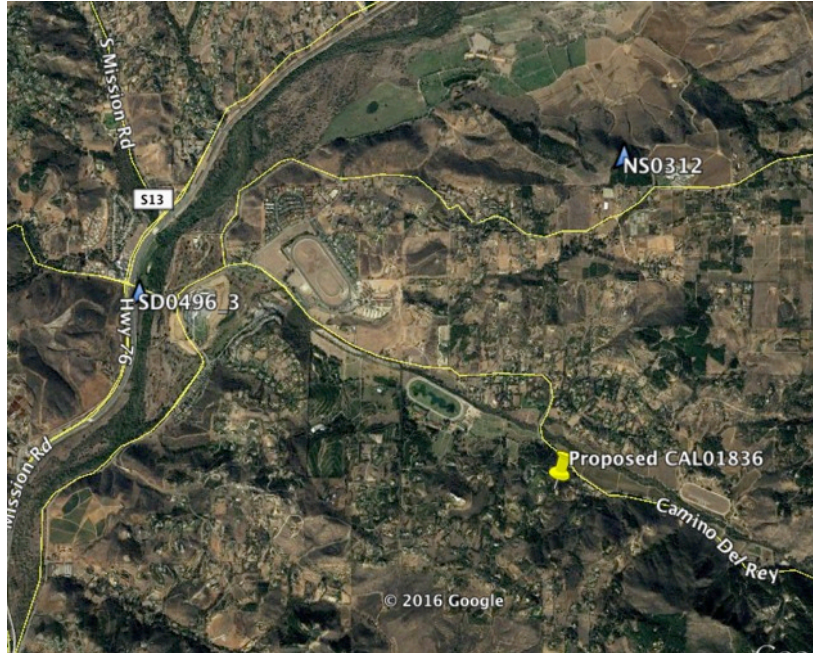
The installation of this newer, faster network will greatly enhance personal, business and emergency communications for this area of rural San Diego County. Semi-rural communities of the County, like the Bonsall area, are especially prone to isolation. Communications are lost if phone lines are burned, and commuters face danger if there is an accident or car trouble along the highway or back country roads. The communications that a facility like this provides are vital to public safety. It should be noted that *public health, safety and welfare* is a key finding for a Major Use Permit. Regarding the attached RF Coverage Maps, note the following color-coding:

- White: No coverage
- Red: Little to no coverage (connection cannot be maintained)
- Yellow: Weak coverage (connection may not be able to be maintained)
- Green: Good coverage

Yellow shaded areas depict zones within a signal strength range that provide acceptable in-vehicle service coverage. Within these areas, an AT&T user should be able to successfully place or receive a call within a vehicle. The red and white areas signify zones where an AT&T user may not be able to receive a consistently acceptable level of service. In addition, the quality of service can differ greatly depending on whether the individual is indoors, outdoors, stationary or in transit. As cars move along these windy roads at high speeds, consistent and reliable cell reception may prove to be evasive.

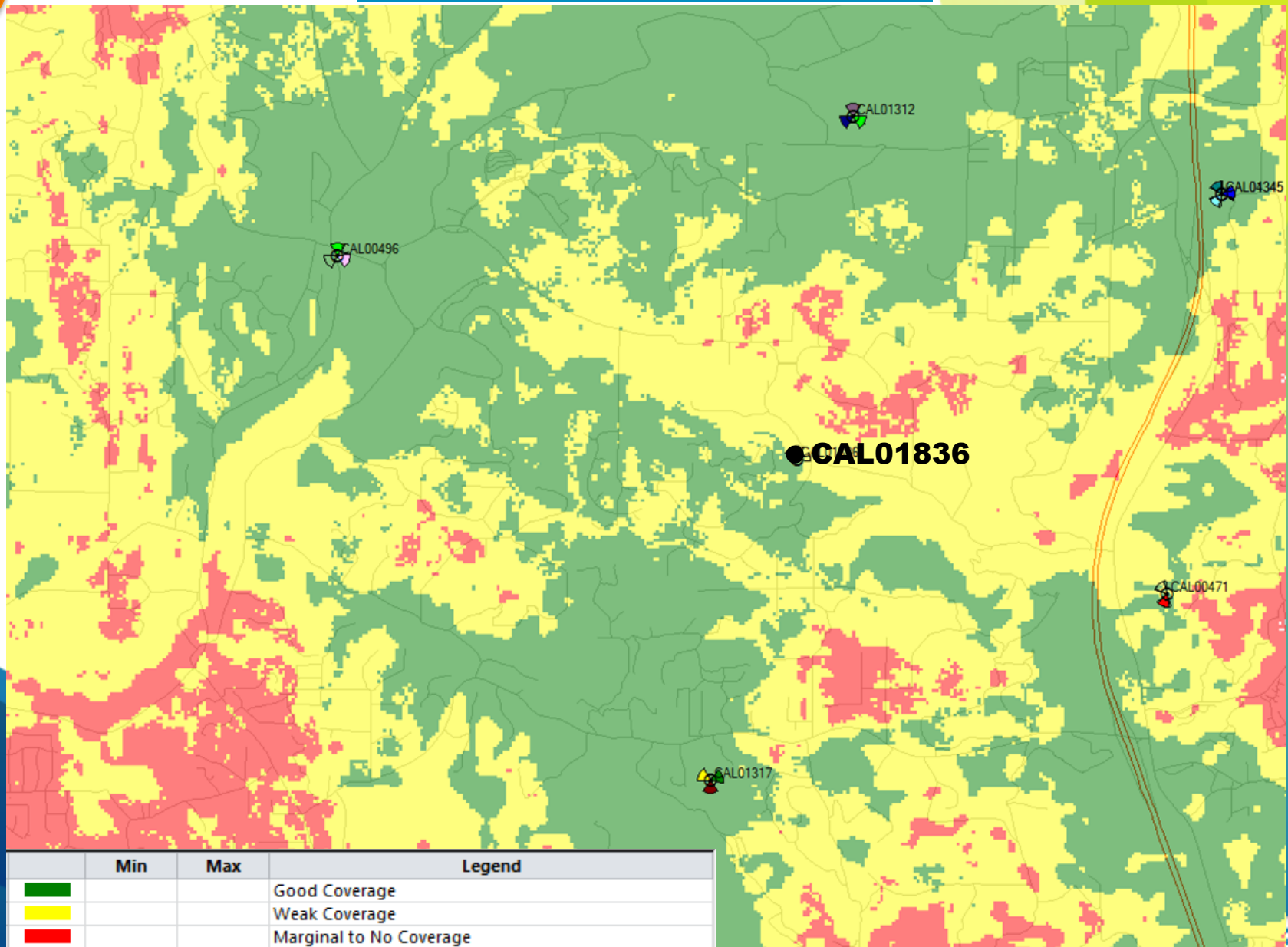
What is not readily evident in the maps are the significant spans of rolling hills and winding roads that make the purveyance of wireless coverage exceedingly difficult. In rural and semi-rural communities such as these, the service area provided by any single wireless facility becomes smaller and smaller because the antennas are not able to “see” over and around hills, let alone provide the data capacity and GPS services that users need. When looking to build a new wireless facility within a given search ring in these areas, ~~or upgrade an existing facility as old and untouched as the subject facility~~, AT&T of course seeks to gain as much height as possible in order to maximize coverage and capacity in the interests of its customers. For the subject facility located off Via Maria Elena, having good, unobstructed visibility in all directions maximizes the service provided by this facility to the increased benefit of the community and reduces the need to construct additional facilities in order to meet the targeted coverage objective.

The proposed communications facility at a strategic bend in the road (off Via Maria Elena) is intended to service a gap in coverage. In the map below, AT&T site CAL00496 is located 2.44 miles away; site CAL01312 is located 1.50 miles away; and site NS0312 is located 1.76 miles away. In addition to the distance apart creating a service gap, topographical variations, including valleys lower in elevation and winding roads, cause significant loss in coverage. These gaps, coupled with the capacity demands described above, make the installation of a new facility at the proposed location crucial to AT&T’s coverage needs.

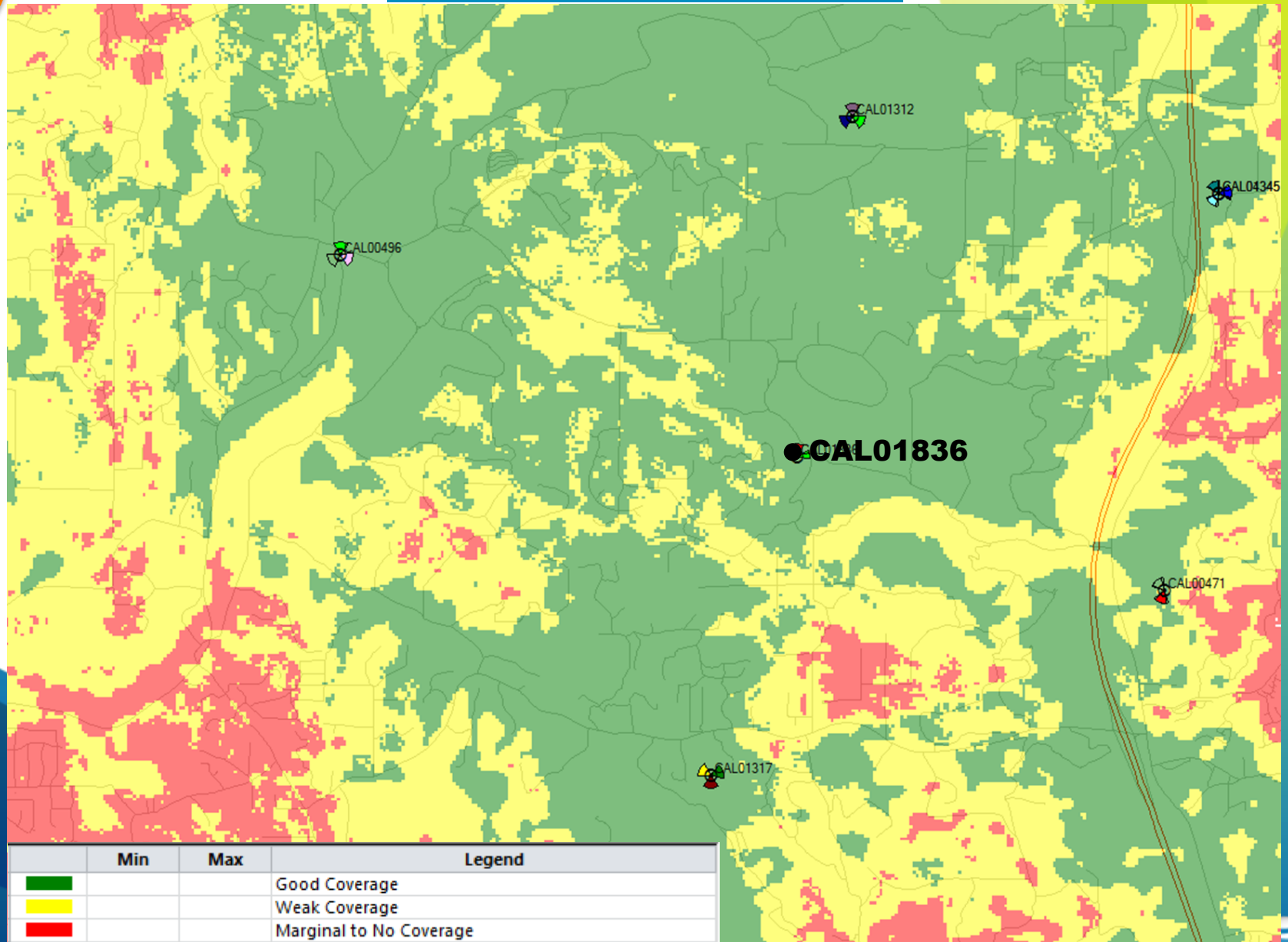


Due to the existing conditions on this property with the grove of mature citrus and avocado trees and the wide coverage objective for this search ring, it is crucial that that the County grant AT&T the proposed site in this location in order to meet AT&T's coverage objectives. The photo simulations further depict that this design is appropriate for the project, since it is designed to blend in with the community character. The height of mountain and the distance from any neighboring views closer to Camino Del Rey serve as an excellent backdrop to attenuate the height.

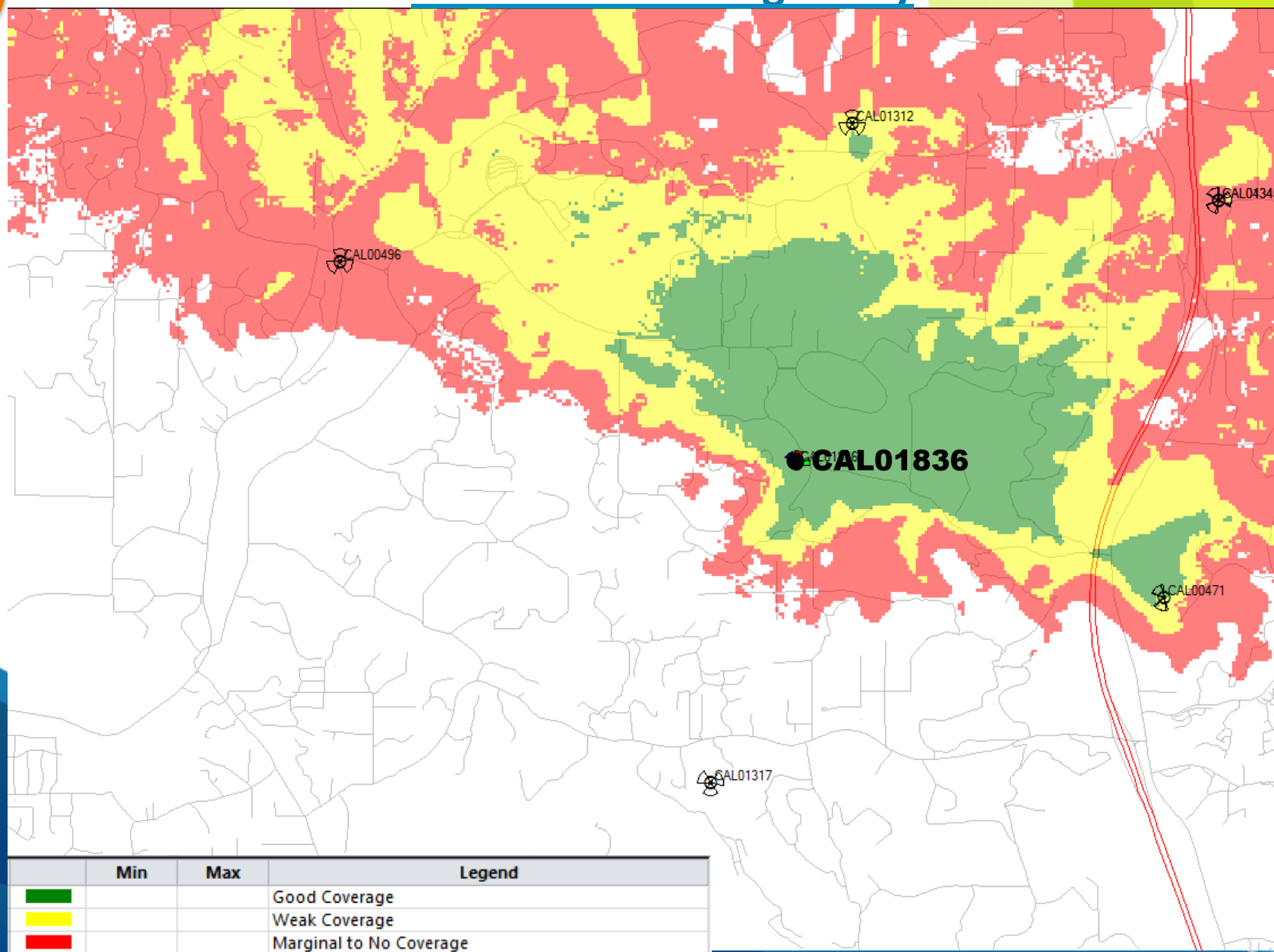
## Coverage without CAL01836



## Coverage with CAL01836



## CAL01836 Coverage Only







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## ALTERNATIVE SITE ANALYSIS

When searching for a site for this AT&T search ring, the original goal was to address the coverage objective utilizing the fewest number of installations possible. The site search first attempted to identify preferred zones and land uses, as required by the Municipal Code.

### *Preference Categories*

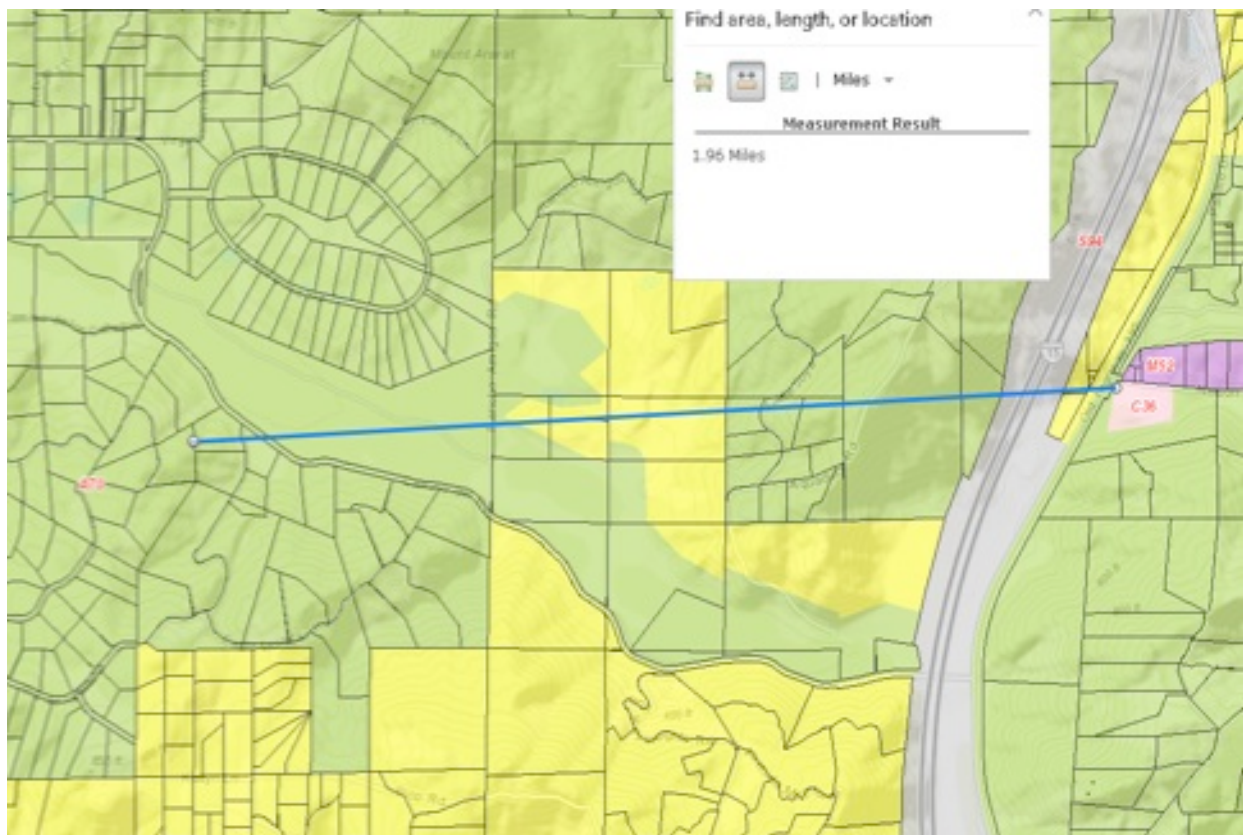
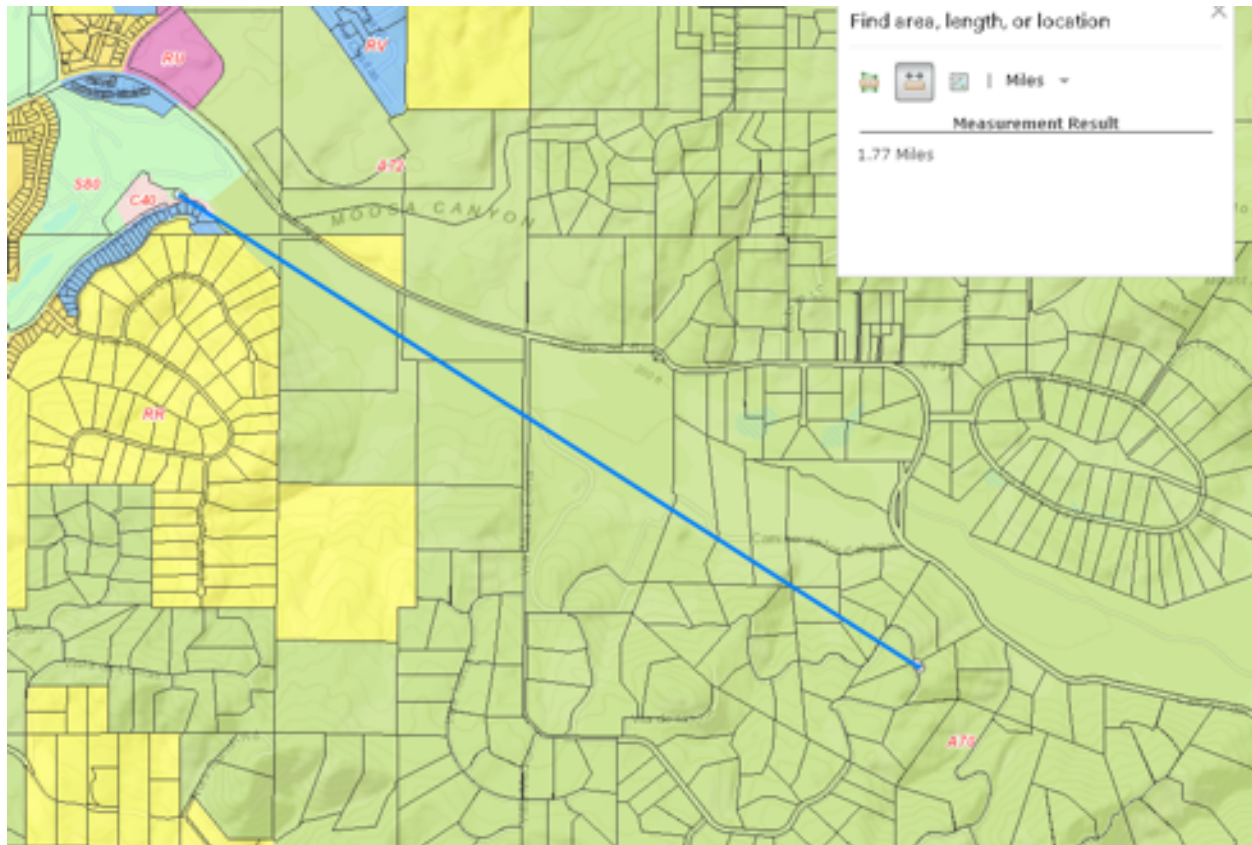
Section 6986 of the Telecommunications Ordinance (Preferred Sites) identifies the preference categories assigned to proposed zones and locations. The project site is zoned A-70 (Limited Agricultural), which is not a preferred zone for telecommunications facilities. The project location is on a site developed with a single-family residence, surrounded by a dense citrus and avocado grove, which functions to help camouflage the proposed faux tree facility. Although the faux tree design is defined as “high visibility” according to the County’s Wireless Ordinance, it is the most appropriate design for the subject site. At 30 feet, the proposed faux mono-broadleaf tree design will appear as a natural landscape element that would disappear from public view as an excepted element.

Below is a list categories that the site development team explored prior to arriving at the proposed location.

- *Preferred Zones: Industrial and Commercial*

Within and around the project search ring there are no industrial or commercial zones. Due to the topographical variations within the area and the coverage needs, this particular search ring was extremely narrow. The surrounding area is solidly agricultural/residential zoning and land use character of the project area (entirely A70, and RR zoning). There are no industrial or commercial sites within the search ring area.

The closest commercially zoned properties are 1.77 miles to the northwest and 1.96 miles to the east – across Interstate 15. See maps below.



AT&T CAL01836 GOPHER CANYON

30370 VIA MARIA ELENA, BONSALE, CA 92003



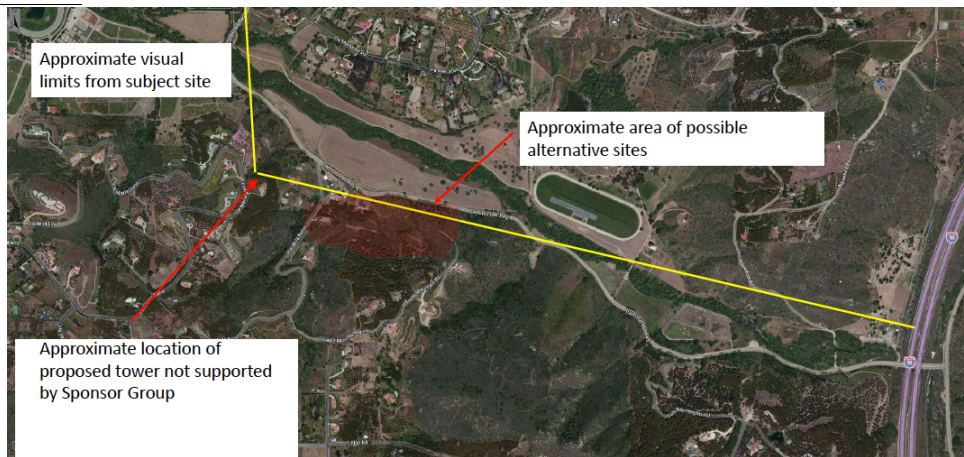
- Preferred Locations:
  - *Public Right of Way / Utility Poles*  
Public right-of-way solutions were sometimes relied upon with earlier generation wireless facilities when the requirements for data capacities were less and quick voice-only coverage solutions were acceptable. The current generation of AT&T broadband installation requires a minimum of 240-square-feet of base station area and the capacity to carry 12 panel antennas. No public right-of-way location was identified that could accommodate the AT&T facility required to provide adequate coverage and service level to the target area. Again, the significant topographical constraints and the amount of right-of-way installations that would be required make utilities poles obsolete and infeasible in this area.
  - *Water Tanks*  
Water tank sites are preferred solutions for wireless sites since they represent a non-residential land use, frequently located within residential areas and located on high ground. However, we were unable to identify any water tank facilities in the search ring.
  - *Non-Residential Land Uses*  
Opportunities for any non-residential land uses were examined. Our search for non-residential land uses included commercial sites, parks, fire stations, schools, churches, community centers and open space areas. However, we were unable to identify any non-residential land uses in the search area.
  - *Co-location Opportunities*  
There were no known collocation opportunities within the search ring. Due to the specific needs of the area and the scarcity of telecommunication sites within the Bonsall Community, collocation was infeasible. According to the map below, the closest site with collocation opportunities is the Sprint site SD54XC389. This site is approximately 0.8 miles away from AT&T's proposed site. It also sits at a lower elevation and serves a vastly different coverage objective across Camino Del Rey. This was not an option for collocation due to technological requirements for the proposed site. Other sites for collocation are on the opposite side of Camino Del Rey, or grouped along Hwy 15 and Gopher Canyon Road. These sites do not serve the same coverage objective and, if collocated upon, would result in multiple sites required to achieve the desired effect.
- *Agricultural/Residential Parcels*  
The coverage objective was very specific for this ring because of the Federally-mandated Fixed Wireless Local Loop objectives to deliver broadband internet to the nearby residents. Due to the topography, the subject site at 30370 Via Maria Elena, offered the most potential for a complete coverage answer.

- The Catherine P. Fitzpatrick Family Trust dated 1/22/01  
7050 Via De La Reina, Bonsall, CA 92003  
APN: 127-490-22-00  
This property owner would not respond to letters of interest
- Matt and Nicole Masteller and Robert Masteller  
7055 Via De La Reina, Bonsall, CA 92003  
APN: 127-490-29-00  
This property owner was interested but the site was not conducive to RF coverage needs and construction requirements.
- Welty Family Living Trust dated 3/9/92  
30312 Via Maria Elena, Bonsall, CA 92003  
APN: 127-490-35-00  
This property owner would not respond to letters of interest.

Although the subject facility is located in a non-preferred zone (A70), it is designed to be in harmony with the aesthetics of the neighborhood. Furthermore, the antenna location within foliage as a screening mechanism helps the AT&T facility blend with the surrounding community character and appear as a natural element for views up the hillside.

#### Other Sites Examined

The Bonsall Community Sponsor Group asked that AT&T look into a number of other sites that did not have residential uses and were close to Camino Del Rey (see attached for aerial images of alternative sites). However, the engineer could not meet the coverage objective with these alternative sites.



The site shown above in red is too far east of the search ring. The site outlined by the Bonsall CSG is also approximately 100 feet lower in elevation than the proposed site and would be blocked by the very hillside that the current site is proposed upon. Furthermore, any installation proposed on the parcels along Camino Del Rey are also far more visible to the whole community and traffic passing through Bonsall. Although the community group felt that the view lines would be similar at sites to the east, they neglected to account for the fixed wireless

local loop (FWLL) directive that AT&T has to deploy high speed wireless internet to residential areas. The site is currently at a strategic location to fulfill this directive and cannot be placed far from the houses because that would risk having the signal be blocked by one of the many rolling hills in the area. A vital part of this coverage objective is the houses to the west of the proposed site, which would not be reached with such a low and far eastern site, as the CSG suggested.

### *Public Benefit*

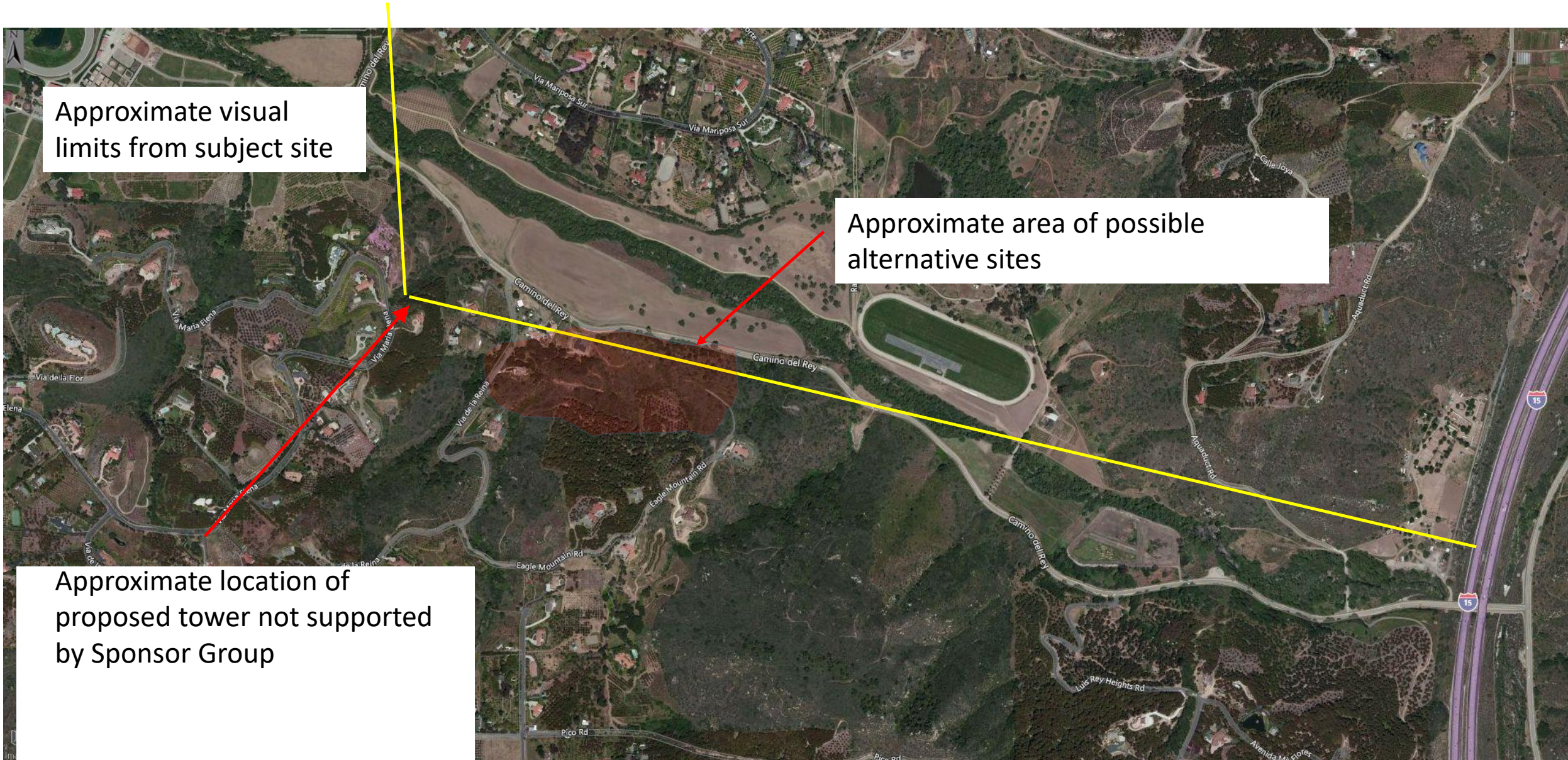
The serious lack of coverage in and around the project area has significant public safety considerations. The majority of 911 calls are now placed by wireless telephone, and many of the emergency responders now rely upon the wireless networks to a large degree for their communications. The proposed wireless facility would be E-911 compliant, meaning that emergency calls placed from the wireless phones of other carriers would connect through the proposed AT&T site. In such hilly areas, regular radio communications may not be reliable, but the cellular networks provide secure communications for areas having network coverage. Also, the wireless systems have the ability to locate lost, injured or stranded persons with the GPS aspect of the cellular networks. These rural communities of the County are vulnerable to isolation in the event of wildfires, earthquakes or other public emergencies if regular landline communications become severed. The installation of the proposed AT&T facility would greatly enhance personal, business and emergency communications for this rural community San Diego County.



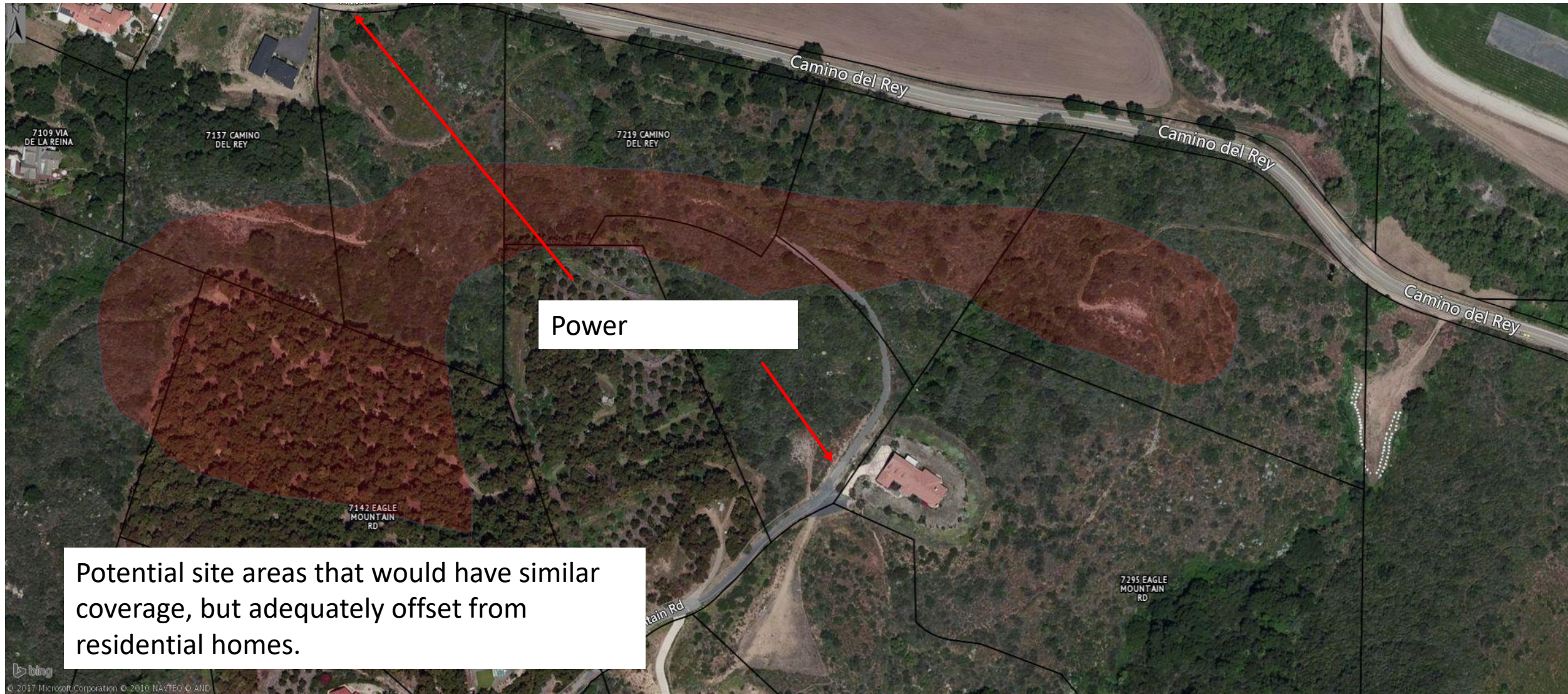
Approximate visual  
limits from subject site

Approximate area of possible  
alternative sites

Approximate location of  
proposed tower not supported  
by Sponsor Group







Potential site areas that would have similar coverage, but adequately offset from residential homes.

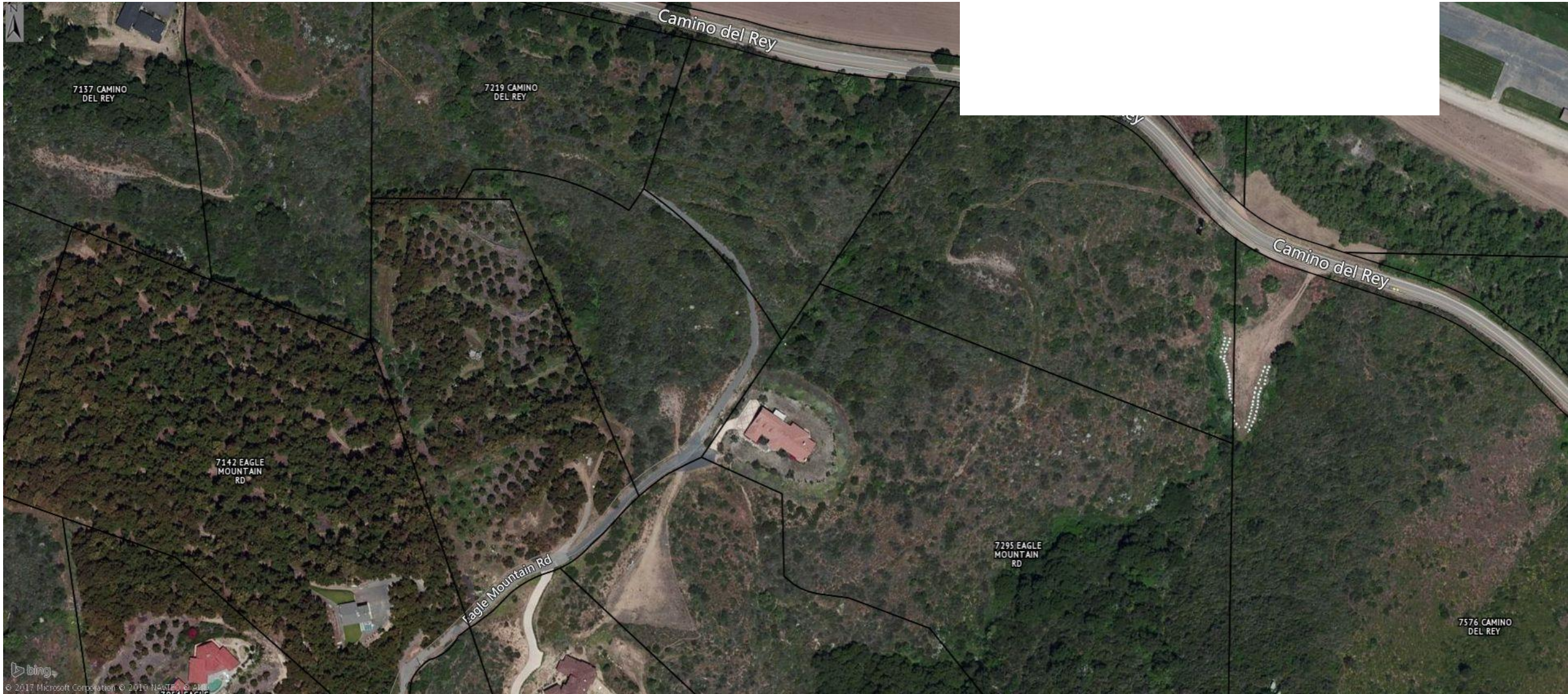


Approximate visual  
limits from subject site

Approximate location of  
proposed tower not supported  
by Sponsor Group

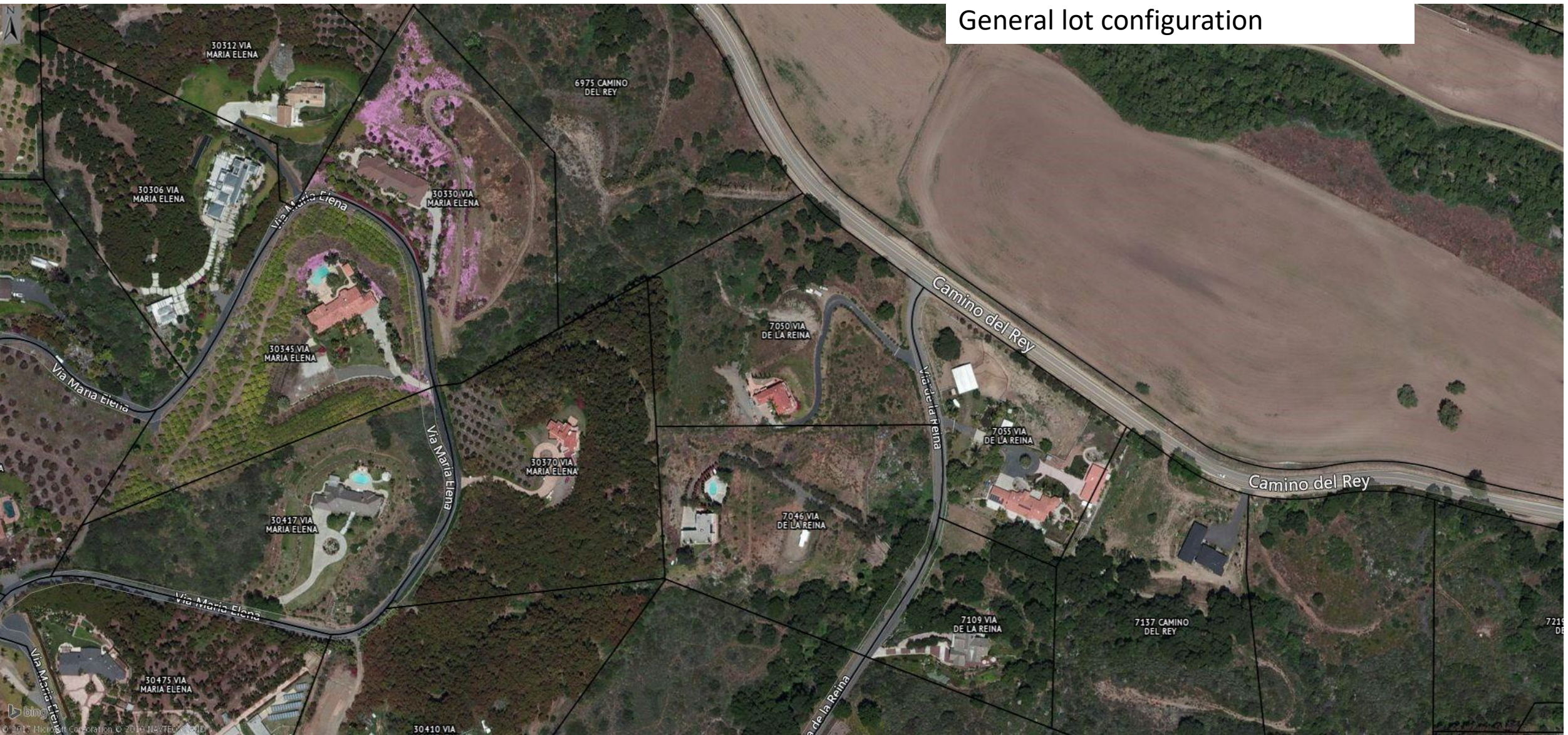
Approximate view lines of  
alternative sites





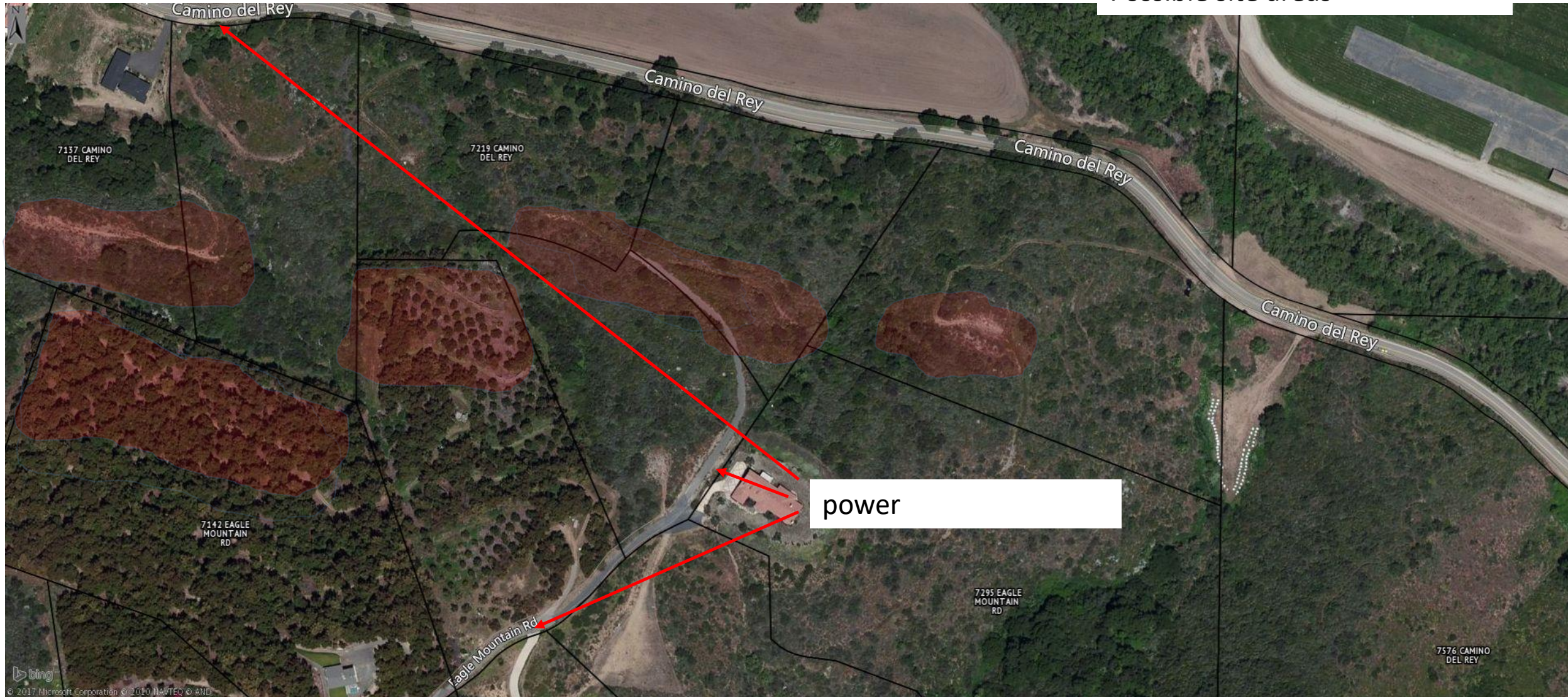


## General lot configuration

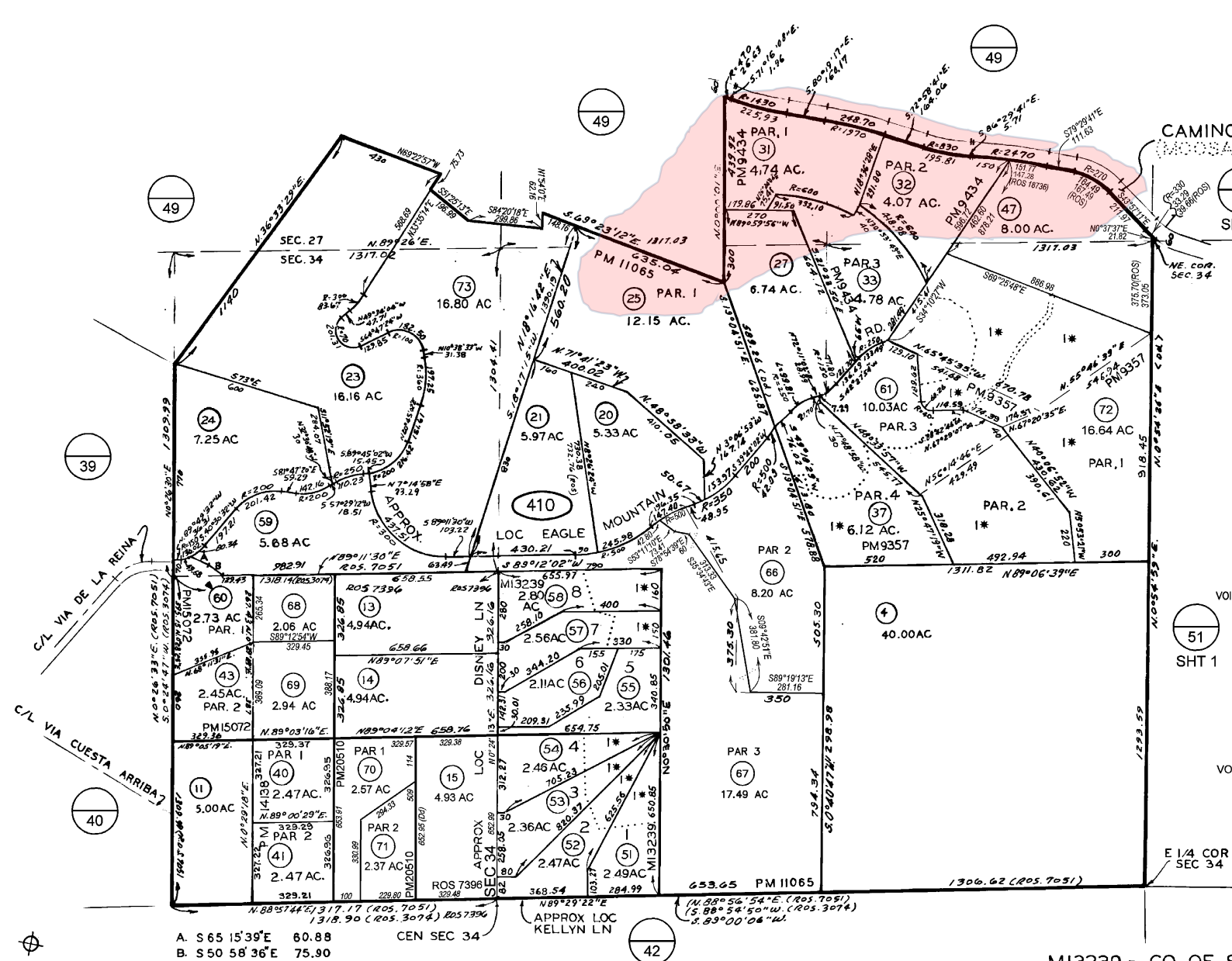
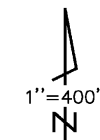




## Possible site areas







01/28/2017 JGD

## CHANGES

BLK	OLD	NEW	YR	CUT
A10	REDRAFT		72	10101
768	13-16	72	3745	
1	17-18	73	6327	
2	19-21	78	3086	
17	22-24	78	3087	
19	25-26	78	3742	
3	27-30	79	952	CC
28	31-33	80	2820	
30	34-37	80	2821	
25	38-40	80	5583	
26	38-39	82	1404	
12	40-41	86	1783	
10	42-43	88	1716	
5	44-46	89	1380	
18	47-50	90	5666	
29	51-54	91	1981	VOID
29	55-58	91	1581	RC
34	59-62	93	5543	
44	63-66	96	47	
18	67-70	97	1163	
35	71-74	97	1434	
37	75-78	97	5557	
38	79-82	02	1028	
62	83-86	02	1239	
9	87-90	05	1536	CC
15	91-94	09	1449	VOID
16	95-98	09	1449	
34	99-102	13	1069	
22	103-106	17	1294	

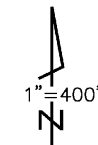
1\* OPEN SPACE

MAS  
4-26-71  
SAN DIEGO COUNTY  
ASSESSOR'S MAP  
BOOK 127 PAGE 41

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL SUBDIVISION OR BUILDING ORDINANCES.

MI3239 - CO OF SD TCT NO 4903  
SEC 27 - T10S-R3W - POR S 1/4  
SEC 34 - T10S-R3W - POR N 1/2  
ROS 3074, 7051, 7396, 10746, 12461, 18736



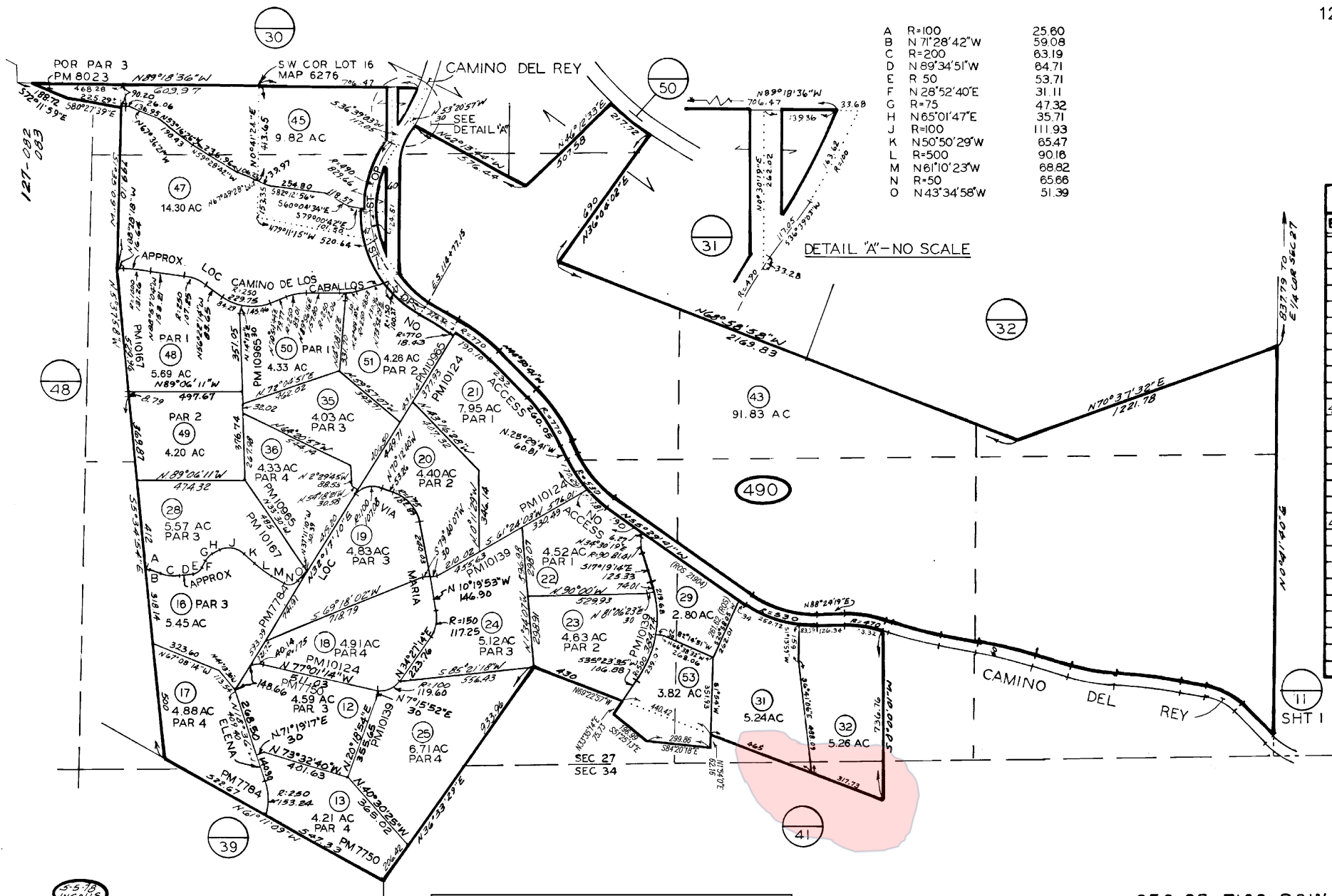


A	R=100	25.60
B	N 71°28'42"W	59.08
C	R=200	63.19
D	N 89°34'51"W	64.71
E	R 50	53.71
F	N 28°52'40"E	31.11
G	R=75	47.32
H	N 65°01'47"E	35.71
J	R=100	111.93
K	N 50°50'29"W	65.47
L	R=500	90.16
M	N 61°10'23"W	68.82
N	R=50	65.66
O	N 43°34'58"W	51.39

02/09/2017 JGD

### CHANGES

BLK	OLD	NEW	YR	CUT	
		1-9	79	10007	
	5	10-13	79	2310	RC
	4	14-17	79	2246	
	10	18-21	81	1012	
	11	22-25	81	1013	
	14	26-28	81	1014	CC
	6	29-32	81	1318	
	15	B/L CHANGE	81	5799	
	15	33-36	81	3083	
	2	SAME	82	84	4684
490	13.9	SAME	82	85	4606
	1.9	27.30	84	37	
	7.8.9	96	89	2098	
	2.37.38	39-44	91	1319	
	3342.444	45	91	1656	
	480-47	46	91	1657	
	40.641	46	91	1657	RC
	46	47-51	04	1467	
490	47851	SAME	11	4672	
	410-22	52	17	1294	
	30&52	53	17	1325	



5-5-16  
INGALLS  
SAN DIEGO COUNTY  
ASSESSOR'S MAP  
BOOK 127 PAGE 49

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL SUBDIVISION OR BUILDING ORDINANCES.

SEC 27-T10S-R3W  
SEC 34-T10S-R3W  
ROS 7051, 8498, 13961, 21904